22 November 2024:

Intelli Modifications: FAQs

Q: What are the reasons for the non-identification of organ of origin? Can additional blood samples be given to resolve this issue and identify the organ of origin?

A: The detection of circulating tumor cells (CTCs) presents a significant challenge in cancer diagnostics and monitoring. CTCs provide a non-invasive window into metastatic disease and could offer prognostic insights and treatment guidance, especially for cancers such as breast, lung, colorectal, and pancreatic. However, the detection and characterization of organ-specific markers on CTCs using fluorescent microscopy are fraught with technical challenges. These challenges arise due to variations in marker expression influenced by spatial (primary / metastatic lesions), grade-wise, stage-wise, hormone receptor status, and the site of CTC release.

Whilst we make every effort to identify the tissue / organ of origin in a CTC positive sample the bio-technical realism must be borne in mind. We work with a limited sample (30 ml), which in the early stages of the disease yields extremely low number of CTCs (typically 1 to 2 cells per ml) and this leaves very few suspected cells for analysis with more than 100 possible anti-body combinations. Accordingly, our best efforts must be understood within the confines of technical feasibility.

Q: How should one proceed when CTCs are identified but organ of origin could not be localized?

A: When CTCs indicative of Trucheck Intelli positivity have been detected in the given blood sample it is suggestive of higher risk of presence of cancer. Please refer to the care flow pathway in the pretest counselling document. The individual is advised to consult a physician for further guidance to undertake follow-up investigations including diagnostic imaging such as Whole Body-MRI or any other suitable imaging procedures. These results should be interpreted in the context of the individual's clinical history and risk factors.

Q: What are the advantages of Trucheck Intelli as a cancer screening test?

A: Studies have shown that screen-detected cancers have a more favorable stage distribution than symptom-detected cancers (1).

Mode of detection is an important, easy-to-obtain proxy indicator for favorable diagnosis beyond earlier stage at diagnosis and as such may be useful for risk stratification in treatment decisions. The detection of CTCs allows for the identification of cancer at an early stage. CTC analysis provides real-time information about the presence of cancer cells in the bloodstream. This is particularly beneficial for individuals at risk of developing various cancers or those with a family history of different cancer types. Early detection is crucial for improving treatment outcomes and increasing the likelihood of successful interventions.

Kindly share patient information brochure with each and every person opting to take Trucheck Intelli screening test.

Q: Can regular cancer screening be avoided if a Multicancer Early Detection test (MCED) like Trucheck Intelli test is taken?

A: Multi-cancer early detection tests are not intended to replace standard cancer screenings for specific cancers. Patients should be aware that they may still need to undergo regular screenings based on established guidelines.

It is recommended that patients are informed that no screening test is perfect; that there is a possibility of false positives (indicating cancer when there is none) or false negatives (missing actual cases of cancer). The physician may also discuss the implications of these scenarios.

MCEDs are required to be evaluated initially through case-control studies followed by larger studies and real-world data accumulation

The true performance of any cancer detection test, including an MCED, is a population scale exercise running into more than 200K to 500K individuals in the high-risk group being followed up over several years (seven years minimum).

Considering the importance of early detection and the imminent harm in waiting for several years and mobilization of financial resources, there is general consensus that it is in the interest of society that MCEDs being made available on the basis of data from well-structured case control studies (please refer to publications on www.datarpgx.com) and smaller blinded studies whilst at the same time real world data should be collated for fine tuning the approach. Datar Cancer Genetics is currently collecting real-world data, and it will be available for public review when a significant number is reached to draw statistically meaningful conclusions.

Q: Why does one have to go for expensive tests like whole body MRI or PET-CT scan if CTCs are detected?

A: Trucheck Intelli is minimally invasive and involves a simple blood draw. This contrasts with traditional cancer screening methods that may be more invasive, such as colonoscopies or mammograms. While this revolutionary test shows great promise, it is not perfect. False positives and false negatives can occur. Following-up with traditional gold standard diagnostic tests like various imaging modalities is necessary to confirm results and rule out false positives. The combination of different screening modalities has repeatedly been shown to enhance the overall sensitivity and specificity of cancer detection, providing a more comprehensive assessment (Please refer to attached publications 2,3,4 available in the public domain).

Q: When the results show CTC positive and follow-up SOC tests negative, can we really consider it as negative screening test?

A: The transient positivity of circulating tumor cells (CTCs) in the blood of asymptomatic individuals can be a complex phenomenon. It may be due to multiple factors like spontaneous clearance of CTCs by immune system. The limitations of the test include possibilities of ‘false positives’ and ‘false negatives’ for detection of CTCs due to biological variations beyond the performance spectrum of the test. In view of all these factors it is recommended that when CTCs are suspected, even after a negative diagnostic evaluation, the risk of

presence of cancer remains elevated and may warrant periodic evaluation in future.

DCG is enhancing value by offering follow-up repeat Trucheck test free of charge (FOC) 3 months after the first test. (N.B. Only the Intelli after 3-month interval will be FOC, all other repeat tests will be chargeable.)

References:

1. Brenner H, Jansen L, Ulrich A, Chang-Claude J, Hoffmeister M. Survival of patients with symptom-and screening-detected colorectal cancer. Oncotarget. 2016 Jul 7;7(28):44695.
2. Lennon AM, Buchanan AH, Kinde I, Warren A, Honushefsky A, Cohain AT, Ledbetter DH, Sanfilippo F, Sheridan K, Rosica D, Adonizio CS. Feasibility of blood testing combined with PET-CT to screen for cancer and guide intervention. Science. 2020 Jul 3;369(6499):eabb9601.
3. Raz D, Nehoray B, Ceniceros A, Motarjem P, Landau S, Gray S. P093: Feasibility of whole-body MRI and multicancer early detection testing in people at high risk for cancer development. Genetics in Medicine Open. 2024 Jan 1;2.
4. Raz D, Nehoray B, Ceniceros A, Motarjem P, Landau S, Nelson RA, Gray SW. Effect of cancer screening with multi-cancer early detection testing and whole-body MRI on cancer worry in a high-risk population.